

## Figure 1

*RASQQIPWG	IKAIYNNDTL	TSTTGGSGIN	IAVLDTGVNT	SHPDLVNNVE	49	B.sphaericus
AVPSTQTPWG	IKSIYNDQSI	TKTTGGSGIK	VAVLDTGVYT	SHLDLAGSAE	50	TY145
AASQSTPWG	IKAIYNNSNL	TSTSGGAGIN	IAVLDTGVNT	NHPDLSNNVE	49	TA41
AASQSTPWG	IKAIYNNSSI	TQTSGGGGIN	IAVLDTGVNT	NHPDLRNNVE	49	TA39
***AQSVPWG	ISR̄VQAPAAH	NR̄GLTGSGVK	V̄AVLDTGIS*	THPDL**NIR	44	Savinase
QCKDFTGATT	PINNSCTDRN	GHGTHVAGTA	LADGGSQAG	IYGVAPDADL	99	
QCKDFTQSNP	LVDGSCTDRQ	GHGTHVAGTV	LAHGGSNGQG	VYGVAPQAKL	100	
QCKDFTVGTN	FTDNSCTDRQ	GHGTHVAGSA	LANGGT*GSG	VYGVAPDADL	98	
QCKDFTVGTT	YTNNCTDRQ	GHGTHVAGSA	LADGGT*GNG	VYGVAPDADL	98	
GGASFVPGEF	****STQDGN̄	GHGTHVAGT̄I	AALNN**SIG	V̄LGVAPSAEL	88	
WAYKVLLDSG	SGYSDDIAAA	IRHAADQATA	TGTKTIISMS	LGSSANNSLI	149	
WAYKVLGDNG	SGYSDDIAAA	IRHVADEASR	TGSKVVINMS	LGSSAKDSLI	150	
WAYKVLGDDG	SGYADDIAEA	IRHAGDQATA	LNTKVVINMS	LGSSGESSLI	148	
WAYKVLGDDG	SGYADDIAAA	IRHAGDQATA	LNTKVVINMS	LGSSGESSLI	148	
ȲAVKVLGASG	SGSVSSIAQG	L̄EWAGNNG**	***MHV̄ANLS	LGSPSPS̄ATL	133	
SSAVNYAYSK	GVLIVAAAGN	SGYSQGTIGY	PGALPNAIAV	AALENVQQNG	199	
ASAVDYAYGK	GVLIVAAAGN	SGSGSNTIGF	PGGLVNAVAV	AALENVQQNG	200	
TNAV DYAYDK	GVLIIAAAGN	SGPKPGSIGY	PGALVNAVAV	AALENTIQNG	198	
TNAV NYSYNK	GVLIIAAAGN	SGPYQGSIGY	PGALVNAVAV	AALENKVENG	198	
EQAVNS̄ATS̄R	GVLVVĀASGN	SGA**GS̄IS̄Y	PARYANAM̄AV	GATDQ̄N****	177	
TYRVADYSSR	GYISTAGDYV	IQEGDIEISA	PGSSVYSTWY	NGGYNTISGT	249	
TYRVADFSSR	GNPATAGDYI	IQERDIEVSA	PGASVESTWY	TGGYNTISGT	250	
TYRVADFSSR	GHKRTAGDYV	IQKGDVEISA	PGAAVYSTWF	DGGYATISGT	248	
TYRVADFSSR	GYSWTDGDYA	IQKGDVEISA	PGAAIYSTWF	DGGYATISGT	248	
*NNRASFSQY	GA*****	****GL̄DIVA	PGVNVQ̄STYP	GSTYAS̄LNGT	214	
SMATPHVSGL	AAKIWAENPS	LSNTQLRSNL	QERAKSVDIK	GGYGAAIGDD	299	
SMATPHVAGL	AAKIWSANTS	LSHSQLRTEL	QNRKVYDIK	GGIGAGTGDD	300	
SMASPHAAGL	AAKIWAQSPA	ASNVDVRGEL	QTRASVNDIL	SGNSAGSGDD	298	
SMASPHAAGL	AAKIWAQYPS	ASNVDVRGEL	QYRAYENDIL	SGYYAGYGDD	298	
SMATPH̄VAGA	AALVKQ̄KNPS	WSNVQ̄IRNHL	KNTA**T̄SLG	*****ST	254	
YASGFGFARV	Q				310	
YASGFGYPRV	K				311	
IASGFGFAKV	Q				309	
FASGFGFATV	Q				309	
NLYGSGLVNA	EAATR				269	

**Figure 2**

No: 1 10 20 30  
a) A-Q-S-V-P-Y-G-V-S-Q-I-K-A-P-A-L-H-S-Q-G-Y-T-G-S-N-V-K-V-A-V-  
b) A-Q-S-V-P-W-G-I-S-R-V-Q-A-P-A-A-H-N-R-G-L-T-G-S-G-V-K-V-A-V-

No: 36 40 50 56 60  
a) I-D-S-G-I-D-S-S-H-P-D-L-K-V-A-G-G-A-S-M-V-P-S-E-T-N-P-F-Q-D-  
b) L-D-T-G-I-\*S-T-H-P-D-L-N-I-R-G-G-A-S-F-V-P-G-E-P-\*S-T-Q-D-

No: 70 80 90  
a) N-N-S-H-G-T-H-V-A-G-T-V-A-A-L-N-N-S-I-G-V-L-G-V-A-P-S-A-S-L-  
b) G-N-G-H-G-T-H-V-A-G-T-I-A-A-L-N-N-S-I-G-V-L-G-V-A-P-S-A-E-L-

No: 100 110 120  
a) Y-A-V-K-V-L-G-A-D-G-S-G-Q-Y-S-W-I-I-N-G-I-E-W-A-I-A-N-N-M-D-  
b) Y-A-V-K-V-L-G-A-S-G-S-G-S-V-S-S-I-A-Q-G-L-E-W-A-G-N-N-G-M-H-

No: 130 140 150  
a) V-I-N-M-S-L-G-G-P-S-G-S-A-A-L-K-A-A-V-D-K-A-V-A-S-G-V-V-V-V-  
b) V-A-N-L-S-L-G-S-P-S-P-S-A-T-L-E-Q-A-V-N-S-A-T-S-R-G-V-L-V-V-

No: 160 170 180  
a) A-A-A-G-N-E-G-T-S-G-S-S-T-V-G-Y-P-G-K-Y-P-S-V-I-A-V-G-A-V-  
b) A-A-S-G-N-S-G-A-\*G-S-I-S-\*-\*Y-P-A-R-Y-A-N-A-M-A-V-G-A-T-

No: 190 200 210  
a) D-S-S-N-Q-R-A-S-F-S-S-V-G-P-E-L-D-V-M-A-P-G-V-S-I-Q-S-T-L-P-  
b) D-Q-N-N-N-R-A-S-F-S-Q-Y-G-A-G-L-D-I-V-A-P-G-V-N-V-Q-S-T-Y-P-

No: 220 230 240  
a) G-N-K-Y-G-A-Y-N-G-T-S-M-A-S-P-H-V-A-G-A-A-A-L-I-L-S-K-H-P-N-  
b) G-S-T-Y-A-S-L-N-G-T-S-M-A-T-P-H-V-A-G-A-A-A-L-V-K-Q-K-N-P-S-

No: 250 260 270  
a) W-T-N-T-Q-V-R-S-S-L-E-N-T-T-T-K-L-G-D-S-F-Y-Y-G-K-G-L-I-N-V-  
b) W-S-N-V-Q-I-R-N-H-L-K-N-T-A-T-S-L-G-S-T-N-L-Y-G-S-G-L-V-N-A-

No: 275  
a) Q-A-A-A-Q  
b) E-A-A-T-R

a) = BPN' b) = Savinase

**Figure 3**

